



# Long-Rail Transport Unit STS

Technical Datasheet

STS 1000–STS 1008 / STS 2001–STS 2004 / STS 3001–STS 3025

STS 4001 (synthetic sleepers) / STS 5001–STS 5007

## STS Long-Rail Transport Unit: our freight wagons with special superstructure

Vossloh has equipped standard freight cars with special attachments. These long-rail transport units have cross members and rail holders that make loading timbers and fastenings unnecessary.



### Benefits

- / Extremely versatile deployment
- / Rails up to 180 m in length can be loaded and unloaded
- / Special superstructure shortens loading times
- / Can be combined with Vossloh loading systems, and others following a check
- / Also a component of the SSW rail replacement train

### Applications

- / Infrastructure with a track gauge of 1,435 mm
- / Track + rail 1/2 renewal measures
- / High-speed lines with short track possessions



## STS 1000–STS 1008 Long-Rail Transport Unit Technical Data

Type	Rns <sup>643</sup>
Track gauge	1,435 mm

### Main dimensions

Length over buffers (LoB)	22.4 meters
Height	corresponds to G1 structure
Width (between the stanchions)	2.71 meters
Number of bogies	2
Number of wheelsets per wagon	4
Wheelbase between bogie pins	16,860 mm
Distance between axles on bogie	1,800 mm
Distance between outer wheelsets (a)	17,660 mm
Height of vehicle floor above TOP	1,250 mm
Loading gauge / structure gauge	G1

### Speed

Hauling speed as part of train set	100 km/h
Operating speed	corresponds to loading speed

### Weight

Average tare weight	6 x 24 t/wagon = 144 t/unit
Maximum weight per meter	0
Maximum axle load	22.5 t

### Brake system

Brake system type	KE-GP-A
Brake blocks	LL – IB 116* Bgu
Braking power percentage	dependent upon loading weight
Transport setting (F/P)	dependent upon operation and network
Handbrake / parking brake fitted	in some cases

### On-track operability

Shunting maneuvers not permitted	Hump-shunting, loose shunting and banking not permitted
Sequencing restrictions	head of the train or end vehicle
Smallest traversable curve radius	150 meters
Transport in train set	yes

### Weather constraints

Ambient temperature (operating mode)	no constraints
--------------------------------------	----------------

### Equipment (basic equipment for each machine and features)

Maximum loading capacity	60E1/E2 profile: 42 x 120 m 54E1/E3/E5 profile: 44 x 120 m 49E1/E5 profile: 48 x 120 m others as per STS Loading
Number of wagons	6
Method of securing load	as per STS Loading Guidelines clamping block
Load bundling	on request
Loading / unloading of the rails (middle of track, on sleeper heads etc.)	as per the Loading System
Performance data	as per the Loading System
Personnel / machine operators / crew (number and qualification)	as per the Loading System
Technical drawing of machines	see TI Wagon Catalogue
Wagon equipment	clamping block, stanchions, bulkhead doors, checker plate steel flooring, STS racks, end vehicle deflector door

## STS 2001–STS 2004 Long-Rail Transport Unit Technical Data

Type	Rs (MAV)
Track gauge	1,435 mm

### Main dimensions

Length over buffers (LoB)	19.9 meters
Height	corresponds to G1 structure
Width (between the stanchions)	2.75 meters
Number of bogies	2
Number of wheelsets per wagon	4
Wheelbase between bogie pins	14,680 mm
Distance between axles on bogie	1,800 mm
Distance between outer wheelsets (a)	16,660 mm
Height of vehicle floor above TOP	1,260 mm
Loading gauge / structure gauge	G1

### Speed

Hauling speed as part of train set	100 km/h
Operating speed	corresponds to loading speed

### Weight

Average tare weight	7 x 22.4 t/wagon = 156.8 t/unit
Maximum weight per meter	4
Maximum axle load	20 t

### Brake system

Brake system type	KE-GP-A
Brake blocks	GG
Braking power percentage	dependent upon loading weight
Transport setting (F/P)	dependent upon operation and network
Handbrake / parking brake fitted	in some cases

### On-track operability

Shunting maneuvers not permitted	Hump-shunting, loose shunting and banking not permitted
Sequencing restrictions	head of the train or end vehicle
Smallest traversable curve radius	150 meters
Transport in train set	yes

### Weather constraints

Ambient temperature (operating mode)	no constraints
--------------------------------------	----------------

### Equipment (basic equipment for each machine and features)

Maximum loading capacity	60E1/E2 profile: 36 x 120 m 54E1/E3/E5 profile: 40 x 120 m 49E1/E5 profile: 44 x 120 m others as per STS Loading
Number of wagons	7
Method of securing load	as per STS Loading Guidelines clamping block
Load bundling	on request
Loading / unloading of the rails (middle of track, on sleeper heads etc.)	as per the Loading System
Performance data	as per the Loading System
Personnel / machine operators / crew (number and qualification)	as per the Loading System
Technical drawing of machines	see T1 Wagon Catalogue
Wagon equipment	stanchions, bulkhead doors, wooden flooring, STS racks, end vehicle deflector door

## STS 3001–STS 3025 Long-Rail Transport Unit Technical Data

Type	Rs (B)
Track gauge	1,435 mm

### Main dimensions

Length over buffers (LoB)	21.7 meters
Height	corresponds to G1 structure
Width (between the stanchions)	2.61 meters
Number of bogies	2
Number of wheelsets per wagon	4
Wheelbase between bogie pins	16,660 mm
Distance between axles on bogie	1,800 mm
Distance between outer wheelsets (a)	18,460 mm
Height of vehicle floor above TOP	1,230 mm
Loading gauge / structure gauge	G1

### Speed

Hauling speed as part of train set	100 km/h
Operating speed	corresponds to loading speed

### Weight

Average tare weight	6 x 24.4 t/wagon = 146.4 t/unit
Maximum weight per meter	3.7
Maximum axle load	20 t

### Brake system

Brake system type	KE-GP
Brake blocks	LL – IB 116* Bgu
Braking power percentage	dependent upon loading weight
Transport setting (F/P)	dependent upon operation and network
Handbrake / parking brake fitted	no

### On-track operability

Shunting maneuvers not permitted	Hump-shunting, loose shunting and banking not permitted
Sequencing restrictions	head of the train or end vehicle
Smallest traversable curve radius	150 meters
Transport in train set	yes

### Weather constraints

Ambient temperature (operating mode)	no constraints
--------------------------------------	----------------

### Equipment (basic equipment for each machine and features)

Maximum loading capacity	60E1/E2 profile: 36 x 120 m 54E1/E3/E5 profile: 40 x 120 m 49E1/E5 profile: 44 x 120 m others as per STS Loading
Number of wagons	6
Method of securing load	as per STS Loading Guidelines clamping block
Load bundling	on request
Loading / unloading of the rails (middle of track, on sleeper heads etc.)	as per the Loading System
Performance data	as per the Loading System
Personnel / machine operators / crew (number and qualification)	as per the Loading System
Technical drawing of machines	see TI Wagon Catalogue
Wagon equipment	stanchions, bulkhead doors, wooden flooring, STS racks, end vehicle deflector door

## STS 4001 (synthetic sleepers) Long-Rail Transport Unit

### Technical Data

Type	Rs (B)
Track gauge	1,435 mm

#### Main dimensions

Length over buffers (LoB)	21.7 meters
Height	corresponds to G1 structure
Width (between the stanchions)	2.61 meters
Number of bogies	2
Number of wheelsets per wagon	4
Wheelbase between bogie pins	16,660 mm
Distance between axles on bogie	1,800 mm
Distance between outer wheelsets (a)	18,460 mm
Height of vehicle floor above TOP	1,230 mm
Loading gauge / structure gauge	G1

#### Speed

Hauling speed as part of train set	100 km/h
Operating speed	corresponds to loading speed

#### Weight

Average tare weight	6 x 24.4 t/wagon = 146.4 t/unit
Maximum weight per meter	0
Maximum axle load	20 t

#### Brake system

Brake system type	KE-GP
Brake blocks	LL – IB 116* Bgu
Braking power percentage	dependent upon loading weight
Transport setting (F/P)	dependent upon operation and network
Handbrake / parking brake fitted	no

#### On-track operability

Shunting maneuvers not permitted	Hump-shunting, loose shunting and banking not permitted
Sequencing restrictions	head of the train or end vehicle
Smallest traversable curve radius	150 meters
Transport in train set	yes

#### Weather constraints

Ambient temperature (operating mode)	no constraints
--------------------------------------	----------------

#### Equipment (basic equipment for each machine and features)

Maximum loading capacity	60E1/E2 profile: 36 x 120 m 54E1/E3/E5 profile: 40 x 120 m 49E1/E5 profile: 44 x 120 m others as per STS Loading
Number of wagons	6
Method of securing load	as per STS Loading Guidelines clamping block
Load bundling	on request
Loading / unloading of the rails (middle of track, on sleeper heads etc.)	as per the Loading System
Performance data	as per the Loading System
Personnel / machine operators / crew (number and qualification)	as per the Loading System
Technical drawing of machines	see TI Wagon Catalogue
Wagon equipment	clamping block, stanchions, bulkhead doors, wooden flooring, perforated metal gratings STS racks and end-vehicle deflector door

## STS 5001–STS 5007 Long-Rail Transport Unit Technical Data

Type	RIns
Track gauge	1,435 mm

### Main dimensions

Length over buffers (LoB)	21.48 meters
Height	corresponds to G1 structure
Width (between the stanchions)	2.74 meters
Number of bogies	2
Number of wheelsets per wagon	4
Wheelbase between bogie pins	14,150 mm
Distance between axles on bogie	1,800 mm
Distance between outer wheelsets (a)	15,950 mm
Height of vehicle floor above TOP	1,170 mm
Loading gauge / structure gauge	G1

### Speed

Hauling speed as part of train set	100 km/h
Operating speed	corresponds to loading speed

### Weight

Average tare weight	6 x 27.7 t/wagon = 166.2 t/unit
Maximum weight per meter	0
Maximum axle load	22.5 t

### Brake system

Brake system type	WABCO / KE-GP-A
Brake blocks	LL – IB 116* Bgu
Braking power percentage	dependent upon loading weight
Transport setting (F/P)	dependent upon operation and network
Handbrake / parking brake fitted	no

### On-track operability

Shunting maneuvers not permitted	Hump-shunting, loose shunting and banking not permitted
Sequencing restrictions	head of the train or end vehicle
Smallest traversable curve radius	150 meters
Transport in train set	yes

### Weather constraints

Ambient temperature (operating mode)	no constraints
--------------------------------------	----------------

### Equipment (basic equipment for each machine and features)

Maximum loading capacity	60E1/E2 profile: 40 x 120 m 54E1/E3/E5 profile: 44 x 120 m 49E1/E5 profile: 48 x 120 m others as per STS Loading
Number of wagons	6
Method of securing load	as per STS Loading Guidelines clamping block
Load bundling	on request
Loading / unloading of the rails (middle of track, on sleeper heads etc.)	as per the Loading System
Performance data	as per the Loading System
Personnel / machine operators / crew (number and qualification)	as per the Loading System
Technical drawing of machines	see TI Wagon Catalogue
Wagon equipment	clamping block, stanchions, bulkhead doors, checker plate steel flooring, STS racks, end vehicle deflector door stanchions, bulkhead doors, perforated metal gratings and wood flooring, STS racks and end-vehicle deflector door

Global expertise in  
over 100 countries

